REMARKS

Claims 21-25 were examined in the Outstanding Office Action mailed on 09/07/2006. Claims 1-20 and 26-33 stand withdrawn from consideration. Claims 21-25 were rejected under 35 U.S.C. 102(b) (or alternatively under 35 U.S.C. § 103) as being anticipated by Patent Number WO 02/42555A1 naming as inventors Lipponen *et al* (hereafter Lipponen), and also by US Patent Number 4,152,202 issued to DeLigt (hereafter DeLigt).

By virtue of this paper, claims 21-25 are sought to be amended, claims 17-20 are sought to be canceled, and new claims 34 and 35 are sought to be added. The amendments and addition are believed not to introduce new matter and their entry is respectfully requested. Claims 21-25, 34 and 35 are thus presented for reconsideration further in view of the below remarks.

Elections/Restrictions

As requested by the Examiner in page 2 point 1 (last two lines) of the Outstanding Office Action , claims 26-32 have been marked as withdrawn. Applicants thank the Examiner for noting the error, as well as pointing that the claims could be rejoined when the generic claim is in condition for allowance.

Claim Rejections 35 U.S.C. § 102 (b)/103(a)

Claims 21-25 were rejected under 35 U.S.C. 102(b)/103(a) as being anticipated by Lipponen, as also by DeLigt. The rejections are believed to be rendered moot at least in view of the foregoing amendments as explained below.

Currently Amended claim 21 recites:

> A system for controlling one or more properties of a sheet of material to be manufactured on a sheet-making machine comprising:
>
> a plurality of actuators distributed in the cross-machine direction over said sheet of material, ***each actuator being operable to perform a first control action with a magnitude on a slice of said sheet of material***, the actuator ***also being operable to perform a second control action to manipulate a cross-directional shape within said slice***, each of said plurality of actuators being controllable to vary the properties of said sheet of material by ***varying both said magnitude and said cross-directional shape within said slice***;

> scanners distributed over said sheet of material to measure properties data about the properties of said sheet of material; and
>
> a controller in communication with said scanners for calculating said first control action and said second control action for each of said plurality of actuators, and implementing said first control action and said second control action at each of said plurality of actuators such that said actuators co-operate to adjust the properties of said sheet of material to desired targets.
>
> (***Emphasis Added***)

Thus an approach according to currently amended claim 21 relates to a situation where a system for controlling the properties of a sheet of material is provided with a number of actuators where each of the actuator has the ability to perform a control action with a magnitude on a slice of the sheet, and also to perform another control action to manipulate the cross-direction shape of the actuator within the slice.

Variation between measured properties and desired targets are minimized by manipulating both the magnitude and the cross-directional shape of each actuator.

The art of record does not disclose or reasonably suggest such a feature. Accordingly, amended independent claim 21 is allowable over the art of record.

Claims 22-25, 34 and 35 (as well as withdrawn claims 26-33) are allowable at least as depending from the allowable base claim 21.

Newly added claim 34 is allowable independently in reciting that each actuator is individually operable to perform the first and second control actions noted above. Such individual control may provide enhanced precision in the fabrication process.

In sharp contrast, it appears that actuators of Lipponen are moved at the same time. The description provided with respect to Figure 1 of Lipponen teaches:

> In the device 10 in accordance with the invention, profiling nozzles 11 move on a slide guide 12 and, ***based on counting the turns of a threaded rod 13, a pushing means 14 knows the positions of the nozzles 11.***
>
> (Page 8, Lines 31-32 of Lipponen)

Pushing means 14 appears to rely on the turns of a single threaded rod 13 to determine the position of nozzles 11 (Figure 1 of Lipponen). This appears to suggest that all nozzles are moved at the same time, and thus that a nozzle is not controlled individually. Thus, Lipponen does not teach the features of new added claim 34.

Newly added claim 35 is also believed to be independently allowable over the art of record. Newly added claim 35 recites:

> The system of claim 21, wherein each of said plurality of actuators is controllable to vary the properties of said sheet of material ***by simultaneously varying both said magnitude and said cross-directional shape within said slice***, and wherein said controller implements said first control action and said second control action ***simultaneously at each of said plurality of actuators*** such that said actuators co-operate to adjust the properties of said sheet of material to desired targets. (Emphasis Added)

Thus, according to newly added claim 35, both the magnitude and the cross-directional shape within a slice of material are simultaneously varied to adjust the properties of the sheet of material, and the controller implements the first control action and second control action simultaneously at each of the actuators.

Currently amended claim 23 is allowable independently in reciting that the outlet chamber of the steam actuator includes at least one baffle plate which is movable to control the cross-direction position and dimensions of the outlet chamber.

Currently amended claim 24 is allowable independently in reciting, "... each of said plurality of actuators comprises a steam actuator having an outlet chamber for releasing steam to said sheet of material and including ***a screen plate with openings*** there through covering the outlet chamber and ***at least one movable plate***, such that moving the at least one movable plate with respect to the screen plate acts to fully or partially obstruct openings in the screen plate." (***Emphasis Added***)

Currently amended claim 25 is also allowable independently in reciting that the outlet chamber of the steam actuator includes at least one air jet associated with the outlet chamber dischargable to control the shape of the steam flow.

All rejections and objections are, thus, believed to have been overcome. The Examiner is invited to telephone Mr. Anthony Miologos at 602-313-5683 if it is believed that an interview might be useful for any reason.

Respectfully submitted,

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